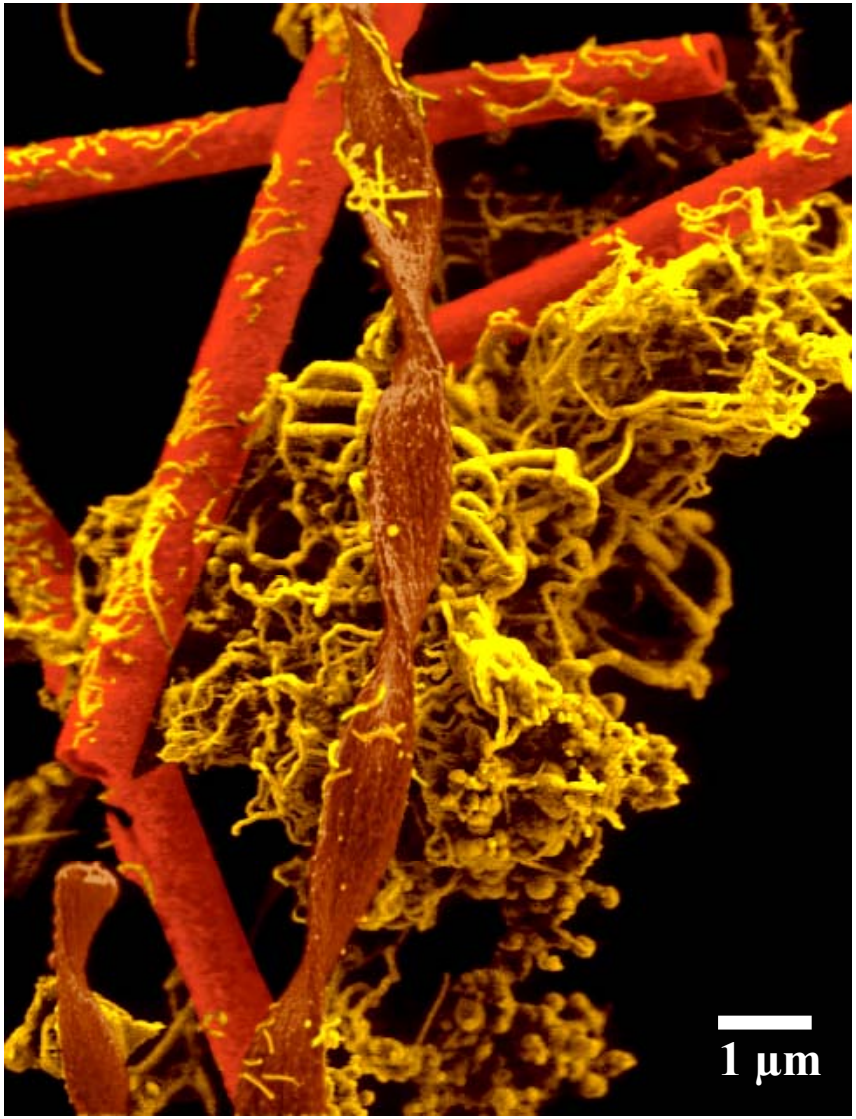
Synchrotron Light Shed on Microbial Templates for Biominerals

G. “pupa”De Stasio, Synchrotron Radiation Center, DMR**00-84402**

Microbes form the most intricate and surprising mineral structures, or “biominerals”. Here we show iron oxide biominerals: straws (red), twists (brown) and filaments.

Bacteria extrude polymers, and these act as templates for biomineral formation.



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Education:

Two undergraduates (Gordon Stephenson, Maria Bravo (minority REU), two graduate students (Bradley H. Frazer, Clara S. Chan) contributed. B. H. Frazer received his Ph.D. from the EPF-Lausanne, Switzerland in January 2004, and is now a Staff Scientist at the Synchrotron Radiation Center. Clara S. Chan is still a graduate student at UC-Berkeley.
G. Stephenson and Maria Bravo are still in college at UW-Madison.

Outreach:

The SRC hosts yearly Open Houses, during which 200-400 members of the general public are introduced to cutting edge research. The PI has been a demonstrator for the Open Houses every year since 1994.

Students from the REU-2004 program at SRC practice lasso during a party outside the SRC “Home of Aladdin” building.